

CLAIMS

1. A locking mechanism (1) for a latch mechanism in which a latch spindle is turnable to move a latch bolt of the latch mechanism from its latching position, said locking mechanism comprising a rotatable handle (5) having a drive passageway (24) therein for fitting to an adjacent end of the latch spindle, and a locking member (27) mounted on the handle and engageable with cooperating retainer means (33,34) so as to lock the handle against rotation, characterised in that the drive passageway (24) is configured to enable the handle (5) to turn relatively to the latch spindle in opposite directions through a predetermined angle of movement, at one end of which, the handle is engageable with the latch spindle for turning the spindle in an opening direction to move the latch bolt from its latching position and, at the opposite end of which, the handle is in a locking position in which the locking member (27) is engageable with the retainer means (33,34) and the handle is engageable with the spindle to prohibit turning of the latter in said opening direction.
2. The locking mechanism as claimed in claim 1, wherein the locking member (27) is slidably mounted in the handle (5) and is selectively controllable so as to enable it to be engaged with and disengage from the retainer means (33,34).
3. The locking mechanism as claimed in claim 2, wherein the locking member (27) has control means (30) projecting closely adjacent the handle in a convenient position for manual operation by a person gripping the handle, and the locking member (27) is resiliently urged towards a position in which it is engageable with the retainer means (33,34).
4. The locking mechanism as claimed in claim 1, 2 or 3, wherein guide means (28) defining an arc of movement for the locking member (27) when the handle is turned in the opening direction from its rest position.
5. The locking mechanism as claimed in claim 4, including spring means (20) biasing the handle (5) to a rest position corresponding to said one end of said angle of movement defined by the drive passageway (24), said guide means (28) including a stop engageable by the locking member (27) to define said rest position and said retainer means (33,34) being disposed in spaced

relation to said stop in the opposite direction to that in which the handle is turnable from its rest position to turn the latch spindle in the opening direction.

6. The locking mechanism as claimed in claim 5, wherein the retainer means is a hole (33,34) with which a projecting end of the locking member (27) is engageable to lock the handle in its locking position and the guide means is in the form of an arcuate groove (28) along which the projecting end of the locking member (27) moves when the handle is turned from its rest position in the opening direction of the latch spindle, and the stop defining the rest position of the handle is formed by an end of the arcuate groove adjacent the retainer means.

7. The locking mechanism as claimed in claim 5 or 6, wherein the handle (5) is in the form of a lever arm (8) which, in the rest position of the handle is arranged to be substantially horizontal, and wherein the retainer means is disposed along the arc of movement of the locking member (27) above the stop defining the rest position and at a position spaced of the order of 45-60° above the stop, whereby the lever arm is lifted in order to permit the locking member (27) to engage with the retainer means (33,34) and lock the handle in its locking position.

8. The locking mechanism as claimed in claim 5, 6 or 7, wherein the guide means (28) is of semi-circular configuration so as to provide a stop and rest position at opposite ends of the guide means, and wherein the retainer means (33,34) is duplicated adjacent opposite ends of the guide means, whereby the handle (5) may be fitted so as to provide for either clockwise or anticlockwise rotation for turning the handle from its rest position to move the latch spindle in the opening direction.

9. The locking mechanism as claimed in any preceding claim, wherein the handle (5) is rotatably mounted in a base plate (2) securable to a door having the latch mechanism, said base plate also mounting the retainer means (33,34) and other components of the mechanism.

10. The locking mechanism as claimed in any preceding claim, wherein the drive passageway (24) in the handle (5) is axially fluted and has an internal cross-section comprising equally spaced ribs and grooves (25,26) symmetrically spaced about the internal periphery of the passageway and

arranged so as to enable the handle (5) to have a predetermined degree of rotational freedom relative to the latch spindle when engaged with the latter.

11. The locking mechanism as claimed in claim 10, wherein the bottom periphery of each of the grooves (26) is of part circular shape in cross-section

5 having a diameter substantially corresponding to the length of the diagonal of the square section of the adjacent end of the latch spindle so that the handle (5) can turn relatively to the latch spindle in opposite directions through said predetermined angle of movement, at opposite ends of which, the ribs (25) engage the square section latch spindle.

10 12. The locking mechanism as claimed in any preceding claim, in combination with a handle (5) having a passageway (42) therein for fitting to the end of the latch spindle opposite to that fitted with the locking mechanism (1).

15 13. The locking mechanism as claimed in claim 12, in combination with a two-part latch spindle (50), both parts (51,52) of which are of square section with one part twisted with respect to the other to accommodate the change in relative positions of the drive passageway (24) of the locking mechanism (1) when its handle (5) is selected to work in an opposite direction of rotation.

20 14. A latch mechanism comprising a latch bolt movable from a latching position to a release position in response to turning of a latch spindle of the latch mechanism, and a locking mechanism (1) as claimed in any one of the preceding claims having the passageway (24) of its rotatable handle (5) fitted to an adjacent end of the latch spindle.

25 15. A locking mechanism for a latch mechanism in which a latch spindle is turnable to move a latch bolt of the latch mechanism from its latching position, said locking mechanism comprising a rotatable handle (5) for fixing to an adjacent end of the latch spindle for turning the latter, and a locking member (27) mounted on the handle and engageable, in a locking position of the handle, with cooperating retainer means (33,34) so as to prohibit turning 30 of the handle and, hence, the latch spindle, characterised in that, in an unlocked position, the locking member (27) is engageable with guide means (28) spaced from the locking position and delimiting an arc of movement of the locking member when the handle (5) is turned from a rest position so as to move the latch bolt from its latching position, and actuating means (30) for

operating the locking member so as to permit the handle to be turned from the rest position to the locking position and the locking member to be engageable with the retainer means.